APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,749	04/14/2005	James Martin	P/63564	8352

156   7590   04/22/2009
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EXAMINER
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ART UNIT	PAPER NUMBER
2613	

MAIL DATE	DELIVERY MODE
04/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-16* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date *2/20/09*.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 9-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chang et al. (U.S. Patent Application Publication US 203/0117678 A1) in view of Smith

et al. (U.S. Patent Application Publication US 2003/0020977 A1) and further in view of

Beshai et al. (U.S. Patent US 6,570,872 B1).

Regarding **claim 9**, Chang discloses a communications system (fig. 2)

comprising:

a communications network (fig. 2, network 200; figs. 3-5) comprising network

nodes (fig. 2, nodes 121, 123, 124, 125) and network links between the network nodes

(fig. 2, the links between the nodes);

and a network management system (fig. 4, combination of the NC&M 220 and

module 410) for allocating connections to the network, the connections utilizing the

network nodes and the network links;

in respect of each said connection, there being a number of possible ways to

implement the connection in the network (fig. 2, alternative path and alternative

wavelength);

the network management system including a network state store which maintains

a continuously updated record of current network usage (fig. 2, NC&M 220; paragraph

0119);

the network management system, when allocating the connection to the network,

selecting one of the number of possible ways to implement the connection;

the network management system, accepting switching request signals and

determines a different one of the number of possible ways to implement the connection

(see, for example, paragraph 0110);

the reconfiguration by the network management system being constrained to a

set of possible reconfigurations which is a subset of the set of all possible

reconfigurations of connections on the network (inherent), said subset being defined by

those reconfigurations that can be carried out with no interruption (fig. 2, alternate path

and alternate wavelength).

Chang differs from the claimed invention in that Chang does not specifically

disclose that the network management storing information on network which current

connections are reconfigurable and which are not. However, it is well known in the art

to include unreconfigurable connections in a network. For example, Smith discloses to

include unreconfigurable connections in a network (paragraph 0079, "the first link

between node A and the first intermediate node along the path is fixed") and the

reconfiguration by the network management system is inherently constrained to

reconfiguration of only the reconfigurable connections (paragraph 0079). Therefore, it

would have been obvious for one of ordinary skill in the art at the time when the

invention was made to configure the system of Chang to include connections that are

reconfigurable and connections that are not reconfigurable and to store the information

in the network management system. One of ordinary skill in the art would have been

motivated to do so in order to include pre-provisioned transponders in some of the

nodes in the network.

The modified system of Chang and Smith differs from the claimed invention in

that Chang and Smith do not specifically disclose to reconfigure existing connections.

However, reconfiguring an existing connection to free a connection used by the existing

connection is well known in the art. For example, Beshai from the same filed of

endeavor discloses to reconfigure an existing connection to free a connection used by

the existing connection (column 11, lines 35-43). Therefore, it would have been obvious

for one of ordinary skill in the art at the time when the invention was made to

incorporate the concept of reconfiguring an existing connection of Beshai in the

modified system of Chang and Smith. The motivation for doing so would have been to

free a path used by the existing connection that to facilitate the formation of new

connections (Beshai: column 11, lines 35-43).

Regarding **claims 10 and 16**, the modified system of Chang, Smith, and Beshai

further includes unreconfigurable connections in a network (Smith: paragraph 0079, "the

first link between node A and the first intermediate node along the path is <u>fixed</u>") and the

reconfiguration by the network management system is inherently constrained to

reconfiguration of only the reconfigurable connections (paragraph 0079).

Regarding **claims 11 and 12**, Change further discloses that the network

management system reconfigures a reconfigurable connection by changing one of a

wavelength on which the connection is made (fig. 2, alternative wavelength) and a route

taken by the connection (fig. 2, alternative path).

Regarding **claim 13**, Chang further discloses that the reconfiguration by the

network management system is constrained such that each existing connection on the

network is reconfigured, but not every time in all ways possible for that connection

(paragraph 0110).

Regarding **claim 14**, Chang further discloses that each connection comprises a

main and a standby path, and the reconfiguration by the network management system

is constrained in that only the standby path, and not the main path, of the connection is

changed (paragraph 0113. Note that the NC&M computes and updating the routing

tables based on the network parameters, including the sate of communication lines).

Regarding **claim 15**, Chang further discloses that when first implementing the

connection on the network, it is possible to choose both a route the connection will take

and a wavelength on which the connection will be made, the reconfiguration by the

network management system being constrained in that only one of the route and the

wavelength of the connection is changed, not both (fig. 2).

Response to Arguments

3.   Applicant's other arguments filed on 2/20/2009 have been considered but are not

persuasive.

Regarding claim 9, Applicant argues, "A person skilled in the art would interpret this as a circuit switched network, i.e., a network in which a connection (or a circuit) is set-up between nodes as if the nodes were physically connected. Once a connection like this is established between points A and B, all data (or voice) in one session is transferred between the points A and B via the same connection (circuit), i.e., all the data go along the same way from the points A to B, and all experience the same delay." Examiner respectfully disagrees. Even though the claim des recite the limitation of " ... a communications network comprising network nodes and network links between the network nodes; and a network management system for allocating connections to the network, the connections utilizing the network nodes and network links;...". However, the cited limitation does not necessarily make one ordinary skilled in the art concludes that the system is a circuit switched network. In fact, nowhere does the disclosure disclose that the network is a circuit switched network. Furthermore, in accordance with MPEP, "USPTO personnel are **to give claims their broadest reasonable interpretation** in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)" (MPEP §2106, emphasis added). Chang clearly and explicitly discloses that the network nodes in the system are *linked by the network links*, as shown in, for example, figs. 2 and 5. Chang explicitly discloses, for example,

> In the Abstract:
> "An optical signaling header technique applicable to optical networks wherein packet routing information is embedded in the same channel or wavelength as the data payload so that both the header and data payload propagate through network elements with the same path and the associated delays. The technique effects survivability and security of

the optical networks by encompassing conventional electronic security with an optical security layer by generating replicated versions of the input data payload at the input node, and the transmission of each of the replicated versions over a corresponding one of the plurality of **links**. Moreover, each of the **links** is composed of multiple wavelengths to propagate optical signals or optical packets, and each of the replicated versions of the data payload may be propagated over a selected one of the wavelengths in each corresponding one of the plurality of **links**." (Emphasis added)

In paragraph 0019:

"[0119] Thus, NC&M 220 has stored at any instant the global information necessary to formulate routes to carry the incoming packet traffic by the network elements. Accordingly, periodically NC&M 220 determines the routing information in the form of, for example, global routing tables, and downloads the global routing tables to each of the elements using supervisory channels 221, 222, ... The global routing tables configure the ports of the network elements to create certain communication **links**. For example, NC&M 220 may determine, based upon traffic demand and statistics, that a **fiber optic link** from New York City to Los Angeles (network elements 501 and 504, respectively) is presently required, and the **link** will be composed, in series, of: W1 coupling port 511 of element 501 to port 513 in network element 502; W1 coupling port 514 of element 502 to port 515 of element 503; and W2 coupling port 516 of element 503 to port 517 of element 504. Then, input packet 520 incoming to network element 501 (New York City) and having a destination of network element 504 (Los Angeles) is immediately routed over this established **link**. At network element 504, the propagated packet is delivered as output packet 521 via client interface port 518."

There is no doubts that the "link" of Chang reads on the claimed "link", at least with its broadest reasonable interpretation in light of the disclosure.

Applicant argues, "Chang discloses a network management system for establishing links, but fails to disclose a network management system for allocating connections, which is required by claim 9". However, Chang specifically and explicitly discloses, for example,

"[0104] Now with reference to FIG. 2, which is the same as FIG. 2 of Chang, optical layer 120 of FIG. 1 is shown in more detail including the

> basic technique for setting up a fast **connection** in optical network 200,
> composed of network elements 121-125 (Node 1-Node 5); the setup uses
> optical signaling header 210 for the accompanying data payload 211. This
> technique combines the advantages of circuit-switched based WDM and
> packet-switched based IP technologies. Signaling information is added in
> the form of an optical signal header 210 which is carried in-band within
> each wavelength in the multi-wavelength transport environment. Optical
> signaling header 210, composed of a label containing routing and control
> information such as the source, destination, priority, and the length of the
> packet, propagates through optical network 200 preceding data payload
> 211. Each WDM network element 121-125 senses optical signaling
> header 210, looks-up a **connection** table (discussed later), and takes
> necessary steps such as cross-connections, add, drop, or drop-and-
> continue. The **connection** table is constantly updated by continuous
> communication between NC&M 220 and WDM network elements 121-
> 125. Data payload 211, which follows optical signaling header 210, is
> routed through a path in each network element (discussed later) as
> established by the **connection**. With the arrangement of FIG. 2, there is
> no need to manage the time delay between optical signaling header 210
> and data payload 211, shown by T in FIG. 2, because each network
> element provides the optical delay needed for the short time required for
> **connection** set-up within each network element via delay of an interposed
> fiber. Moreover, the format and protocol of the data payload is
> independent of that of the header, that is, for a given network whereas the
> format and protocol of the header are pre-determined, the format and the
> protocol of the data payload can be the same as or different from those of
> the header."

From the examples shown above, Chang clearly and undoubtedly teaches for

allocating connections.

Applicant argues, "… that a link and a connection are two different things".

However, in accordance with MPEP, "USPTO personnel are **to give claims their**

broadest reasonable interpretation in light of the supporting disclosure. In re

Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)"

(MPEP §2106, emphasis added). According to The American Heritage College

Dictionary, connection means … "2. One that connects, a link." According to

MPEP, "inventor may define specific terms used to describe invention, but must

do so "with reasonable clarity, deliberateness, and precision" (MPEP 2111.01).

Without clearly, specifically, explicitly, and precisely providing Applicant's own

definition, "the words of a claim must be given their 'plain meanings'".

For the above reasons, the prior art references reads on the claim with it

broadest reasonable interpretation in light of the disclosure. The rejection of

claim 9 still stands. For the same reasons, the rejections of claims 10-16 still

stand.

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

    Lu et al. (U.S. Patent Application Publication US 2002/0191247 A1) disclose a

WDM network has a restoration process to re-route wavelengths.

    Halgren et al. (U.S. Patent Application Publication US 2004/0052520 A1)

disclose a WDM network having path protection.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Quan-Zhen Wang whose telephone number is (571)

272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday -

Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information

4/18/2009
/Quan-Zhen Wang/
Primary Examiner, Art Unit 2613